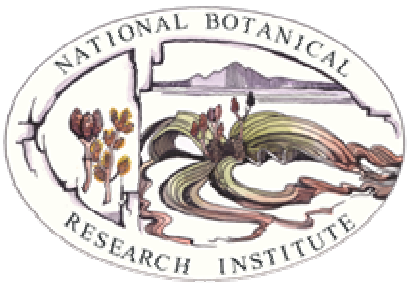

This report was generated from the SEPASAL database (www.kew.org/ceb/sepasal) in August 2007. This database is freely available to members of the public.

SEPASAL is a database and enquiry service about useful "wild" and semi-domesticated plants of tropical and subtropical drylands, developed and maintained at the Royal Botanic Gardens, Kew. "Useful" includes plants which humans eat, use as medicine, feed to animals, make things from, use as fuel, and many other uses.

Since 2004, there has been a Namibian SEPASAL team, based at the National Botanical Research Institute of the Ministry of Agriculture which has been updating the information on Namibian species from Namibian and southern African literature and unpublished sources. By August 2007, over 700 Namibian species had been updated.

Work on updating species information, and adding new species to the database, is ongoing. It may be worth visiting the web site and querying the database to obtain the latest information for this species.

Brachiaria brizantha (Hochst. ex A.Rich.)Stapf [1808]

Family: POACEAE

Synonyms

Urochloa brizantha (A.Rich.)R.D.Webster
Panicum brizanthum A.Rich.

Vernacular names

(Mozambique)	nhacancine [5480]
(South Africa)	kifuta [2259]
Afrikaans (Namibia)	broodgras [2259], broodsinjaalgras [5083] [5115] [5116]
Afrikaans (South Africa)	broodgras [2259], broodsinjaalgras [2259]
Afrikaans (Southern Africa)	broodsinjaalgras [2182]
English (Namibia)	upright brachiaria [2259] [5083] [5115] [5116]
English (South Africa)	bread grass [2259] [5608], broad-leaved false paspalum [2259], common signal gras [2259], large-seed(ed) millet grass [2259], large-seed(ed) panic grass [2259], long-seed millet [5608]
English (Southern Africa)	common signal grass [2182] [5664]
English (Zimbabwe)	upright brachiaria [2259], upright false paspalum [2259]
German (Namibia)	Aufrechtes Armgras [5083] [5115] [5116]
Unknown (south tropical Africa)	palisade grass [3], signal grass [3]
Zezuru (Zimbabwe)	zinyaruzoka [2259]
Zulu (South Africa)	iPunte [2259]

Distribution

Plant origin	Continent	Region	Botanical country
Native	Africa	East Tropical Africa	Kenya [2259] [6573], Tanzania [2259] [6573], Uganda [2259] [6573]
		Northeast Tropical Africa	Chad, Ethiopia, Sudan
		South Tropical Africa	Angola [2259] [5126], Malawi [3] [2259], Mozambique [3] [2259]

			[5480], Zambia [3] [2259] [5481], Zimbabwe [3] [2259] [5125]
		Southern Africa	Botswana [2182] [2259] [5104] [5186], Cape Province [2182] [5104], Caprivi Strip [2182] [5115] [5116], Namibia [2182] [2259] [5104] [5115], Natal [2182] [2259] [5104], Orange Free State [2182] [5104], Swaziland [2182] [2259] [5104] [5452], Transvaal [2182] [2259] [5104]
		West-Central Tropical Africa	Burundi, Cameroon, Rwanda, Zaire [2259]
		Western Indian Ocean	Seychelles
.			
Introduced	Asia-Tropical	Malesia	Borneo, Papua New Guinea, Peninsular Malaysia
	Australasia	Australia	New South Wales, Queensland [1808], Western Australia [1808]
	Pacific	Southwestern Pacific	Fiji
	Southern America	Brazil	Brazilia Distrito Federal, Goias, Mato Grosso, Para, Parana, Sao Paulo
		Caribbean	Trinidad-Tobago
		Northern South America	Guyana, Venezuela
		Western South America	Bolivia, Ecuador
.			
Status Unknown	Africa	West Tropical Africa	Ghana, Guinea, Ivory Coast, Nigeria, Sierre Leone
	Asia-Temperate	Arabian Peninsula	North Yemen
	Southern America	Brazil	Bahia

ISO countries: South Africa [2182] [6573]

Descriptors

Category	Descriptors and states
DESCRIPTION	Herb [6573]; Prostrate/Procumbent/Semi-erect [3]; Tussock Forming/Tufted/Caespitose [3] [5116] [5117]; Erect [3] [2259]; Terrestrial [2182]; Loosely Tufted [2182]; Perennial [2182] [2259] [5104]; Unarmed - unspecified parts; Plant Height 0.3-2.2 m [5104] [5116]
CLIMATE	Tropical Summer Rains [3] [2182] [2259] [5117]; Subtropical, Hot and Arid [3] [2182] [2259]; Annual Rainfall >= 50 mm [5664]
SOILS	Limestone Parent Material [5123]; Gravels/Stony [5123]; Sandy [2182] [5115] [5117] [5664]
HABITAT	Pioneer Species [5117] [5664]; Upland [6573]; Woodland [2182] [2259] [5123]; Grassland/Forb-Land [3] [2182] [5117] [6573]; Wooded Grassland [3] [2182] [2259] [5117]

	[6573]; Shrubby Grassland [6573]; Semi-Desert [2182] [5117]; Termitaria [2259] [5117]; Watercourses [2182] [5664]; Anthropogenic Landscapes [2259] [5117] [5664]; Croplands [2259]; Altitude 50-2400 m a.s.l. [3] [5104] [6573]
PHYSIOLOGY	Grazing/Browsing Resistant [2259] [5117] [5664]; Shade Tolerant [2182] [2259] [5117] [5664]
CONSTRAINTS	Susceptible to Fungal Diseases [2259]
SOURCES OF PLANTING MATERIAL	RBG Kew Seed Bank
FURTHER DATA SOURCES	Botanical Illustration [2259] [5116]; Additional References [5580] [5930]; Regional Distribution Map [2259] [5664]; Botanical Photograph [2182] [5117] [5664]; Databases [5123]; Habit Illustration/Photograph [5664]; Grid Map [2182] [5115] [5116]
SEPASAL DATASHEET STATUS	Nomenclature Checked
CHEMICAL ANALYSES	Nutritional Analyses - aerial parts [5251]; Proteins - aerial parts [5251]

Uses

Major use	Use group	Specific uses
FOOD [2259] [5117] [5608] [5664]	Seeds	
ANIMAL FOOD	Fertile Plant Parts	seeds, primates [5608]; seeds, birds [2259]
	Aerial Parts	unspecified aerial parts, mammals, grazing [2182] [2259] [5115] [5664] [6573]; unspecified aerial parts, mammals, hay/straw [2259] [6573]; leaves, primates, forage [2514]; stems, primates, forage [2514]
BEE PLANTS		pollen source [2259]
ENVIRONMENTAL USES	Indicators	rangelands [5664]

Picture

None recorded

Notes

NOMENCLATURE/TAXONOMY

Name derivation:
The generic name is derived from the Latin 'brachium' meaning 'arm', which alludes to the inflorescence, which is arm-like. The specific name is derived from the Greek 'brizo' meaning 'to nod', and also refers to the inflorescence, which is slightly drooping (nodding) [5116] .

VERNACULAR NAMES

Afrikaans (South Africa), broodgras:
The common name 'broodgras' and the 'briza' (Greek for type of grain) in brizantha, implies that the seed can be used for grain [2259] [5117] [5664] .

DISTRIBUTION

Namibia:
Rare. Occurs in the Grootfontein, Okavango and Caprivi regions [5116] .
Southern Africa:
Common [2182] .
Worldwide:
Occurs throughout tropical and subtropical Africa. It has been introduced to most other tropical parts of the world [5117] .
Worldwide:
Tropical and S. Africa, introduced elsewhere [3] .

DESCRIPTION

Inflorescences:
The inflorescence consists of a few spikelike racemes arranged singly on a central axis (like a railway signal). They are straight at first, curving outwards as they mature. Rarely there is only one. The spikelets are arranged evenly along one side of the rhachis. They are nearly always in a single row, occasionally in two rows towards the base of the raceme. They are 4-6 mm long, green sometimes flushed with purple, beadlike, plump and shining, and usually glabrous, rarely scantily hairy upwards [2259] .
Inflorescences:
Racemes 25-100 mm long. Spikelets are big, round, shiny, neatly arranged on one side of the axis, hairless [5664] .
Leaves:
Leaf blade 100-400 mm long and 7-20 mm wide. Bright green, with rough (sometimes purple) margins. Ligule a ring of hairs [5117] .
Lifeform:
Graminoid [5104] .
Habit:
Erect or geniculately ascending, tufted perennial [6573] .
Inflorescences:
1-16 racemes on an axis 30-200 mm long; racemes (20-) 30-235 mm in length with the rhachis narrowly winged and ciliate at margins. Spikelets are 4-6 mm, glabrous or sparsely pubescent, plumpy elliptic, borne in one row (but sometimes appearing double in upper part of the raceme) [6573] .
Leaves:
Leaf-blades 0.1-1 m long and 3-30mm wide [6573] .
Growth form:
Tufted [6573] .
Height:
0.3-2 m [6573] .

IDENTIFICATION

Characters helpful in distinguishing the species from other perennials in the genus with spikelets the same size include; that the rachis is narrow and 3-angled and the lower glume is distinctly shorter than the rest [2259] .
Distinguished from other Brachiaria species by the 7-nerved lower glume that is separated from the upper glume by a short internode [2182] .
B. brizantha can be distinguished from most other Brachiaria species by its size and hairless spikelets. It can possible be confused with Paspalum urvillei and P. dilatatum, but both these grasses have loose inflorescences and densely hairy spikelets [5664] .

FOOD - SEEDS

The common names 'broodgras' and the 'briza' (Greek for type of grain) in brizantha, 'breadgras', and 'large-seed (ed) millet' implies that the seed can be used for grain [2259] [5117] [5664] .

ANIMAL FOOD - FERTILE PLANT PARTS

Seeds, primates:
The grain is used by chimpanzee (Suzuki 1969) [5608] .

ANIMAL FOOD - AERIAL PARTS

Unspecified aerial parts, mammals, grazing:
A palatable grazing grass, with good forage value. In Mozambique it is good for both grazing and as hay [2259] .
Unspecified aerial parts, mammals, grazing:
An average grazing grass, often with high leaf production, but with hard leaves. It probably becomes hard and less palatable later in the growing season [5117] [5664] .
Unspecified aerial parts, mammals, grazing:
Palatable pasture (good forage value) [2182] .
Leaves, tillers, primates:
The young leaves and tillers are used by baboon (Norton et al. 1987) [5608] .
Unspecifeid aerialparts, mammals, grazing:
In Kenya of good to medium grazing value [6573] .

BEE PLANTS

In Uganda bees are said to collect the pollen [2259] .

ENVIRONMENTAL USES - INDICATORS

Rangelands:
In southern Africa classified as an Increaser I i.e. grasses that are abundant in underutilised veld [5664] .

NUTRITIONAL VALUE

In Namibia it has high nutritive value and palatability [5116] .
Aerial parts, crude protein, P, Ca, OM, DM, crude fibre, fat:
In Namibia one sample was analysed during March 1997; crude protein 4.40%, P 0.07%, Ca 0.37%, OM 82.69%, DM 96.85%, crude fibre 40.17%, fat 1.66% [5251] .

RAINFALL

Namibia:
A climax grass of the northern high rainfall areas [5116] .
South Africa:
Moderate to high rainfall [5117] .
Southern Africa:
Needs a minimum of 500 mm per year [5664] .

ALTITUDE

South tropical Africa:
700-2300 m [3] .
Southern Africa:
50-1,900 m [5104] .
300-2400 m a.s.l. [6573] .

TOPOGRAPHY/SITES

South Africa:
Grows under trees in bushveld and on disturbed soils along roads [5117] .
Southern Africa:
Frequent in formerly disturbed areas of reasonable fertility such as old fallows, on road verges and at the base of termitaria [2259] .
Southern Africa:
Grows in road reserves or in undisturbed veld, next to streams and under trees [5664] .

Southern Africa:
Prefers undisturbed areas near streams [2182] .

SOILS

Southern Africa:
Found on all types of soil but favours sandy soils where the rainfall is moderate to good [2259] .
Southern Africa:
Usually in sandy or rich soils [2182] .

VEGETATION

Wooded or bushed grassland and upland grassland .
Namibia:
A climax grass [5251] .
Southern Africa:
A climax grass [5664] .
Southern Africa:
Grows under trees in open woodland, Savanna, Grassland and Nama-Karoo [2182] .
Wooded or bushed grassland and upland grassland [6573] .

ENVIRONMENTAL FACTORS - MISCELLANEOUS

Namibia:
Rare, possibly because it is selectively grazed as a result of its high nutritive value and palatability [5116] .
Southern Africa:
A climax grass and classified as an Increaser I i.e. grasses that are abundant in underutilised veld [5664] .
Southern Africa:
When fertiliser is added it makes it a palatable grass that can endure heavy grazing [5664] .

FLOWERING/FRUITING/SEED SET

Flowering, South Africa:
December to April [5117] .
Flowering, southern Africa:
December to April [5664] .
Flowering, southern Africa:
December to April, also at other times in favourable habitats [2259] .
Flowering, southern Africa:
October to May [2182] .

CYTOLOGY

For the genus, x = 7, 9 (high polyploidy) [5150] .

FUNGAL DISEASES

Claviceps, rust:
In Mozambique it is subject to infestation by Claviceps in the grains and rust in the leaves, both of which reduce its forage value [2259] .

CULTIVATION

It is utilised as cultivated pasture in many countries [5664] .
South tropical Africa:
Commonly grown as a pasture plant under the names Palisade or Signal grass [3] .

'CROP' MANAGEMENT

Southern Africa:
It delivers a high production when fertiliser is added and this makes it a palatable grass that can endure heavy grazing [5664] .

ACKNOWLEDGEMENTS AND DATASHEET PROGRESS

Updated for southern Africa by E. Irish; checked by C. Mannheimer, September 2005. Entire species edited by C. Mannheimer, July 2007. Sepasal Namibia, National Botanical Research Institute .
Data added from an Illustrated Manual of Kenya Grasses 1987, by Maryam Imbumi, KENRIK, National Museums of Kenya, April 2007 .

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